

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
)	
William A. KINNEY et al.)	
)	
Divisional of)	
Application No.: 09/833,055)	Group Art Unit: 1616
)	
Filed: April 12, 2001)	Examiner: A. PRYOR
)	(anticipated)
For: REGIOSELECTIVE AND STEREO-)	
SELECTIVE OXIDATION OF FUSED)	
RING SYSTEMS USEFUL FOR THE)	
PREPARATION OF AMINOSTEROLS)	

Commissioner of Patents
BOX PATENT APPLICATION
2011 South Clark Place
Customer Window, Mail Stop **Patent Application**
Crystal Plaza Two, Lobby, Room 1B03
Arlington, VA 22202

Sir:

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), Applicants bring to the attention of the Examiner the documents listed on the attached PTO-1449. This Information Disclosure Statement is being filed within three months of the filing date of the above-referenced application.

Copies of the listed documents were previously submitted in prior application no. 09/833,055, filed April 12, 2001, upon which this divisional application is based. Applicants

respectfully request that the Examiner consider the listed documents and evidence that consideration by making appropriate notations on the attached form.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If it should be determined that any of the listed documents does constitute "prior art" under United States law, Applicants reserve the right to present to the office the relevant facts and law regarding the appropriate status of such document.

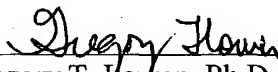
Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

EXCEPT for issue fees payable under 37 C.F.R. §1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account

No. 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR
EXTENSION OF TIME** in accordance with 37 C.F.R. §1.136(a)(3).

Respectfully submitted,

MORGAN, LEWIS & BOCKIUS LLP



Gregory T. Lowen, Ph.D.
Reg. No. 46,882

Dated: June 30, 2003

CUSTOMER NO. 009629
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Ave., NW
Washington, D.C. 20004
(202) 739-3000

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)				Attorney Docket No. 036870-5067-05		Divisional of Application No. 09/833,055	
PTO Form 1449				Applicants: William A. KINNEY et al. PAGE 1 of 6			
				Filing Date: Herewith		Prior Group Art Unit: 1616	
U.S. PATENT DOCUMENTS							
*Examiner Initial		Document Number	Date	Name	Class	Sub Class	Filing Date
		3,016,390	01/09/62	Counsell			
		3,370,070	02/20/68	Klimstra et al.			
		4,220,598	09/02/80	Hixson, Jr. et al.			
		4,372,888	02/08/83	Hjelmeland			
		4,425,273	01/10/84	Iida et al.			
		4,514,393	04/30/85	Castagnola et al.			
		4,545,938	10/08/85	Mosbach et al.			
		4,550,163	10/29/85	Voss et al.			
		4,565,811	01/21/86	Di Schiena			
		4,771,042	09/13/88	Braughler et al.			
		4,793,948	12/27/88	Hatono et al.			
		4,966,897	10/30/90	Angelastro et al.			
		4,994,443	02/19/91	Folkman et al.			
		5,001,116	03/19/91	Folkman et al.			
		5,004,737	04/02/91	Kim et al.			
		5,039,529	08/13/91	Bergendal et al.			
		5,057,509	10/15/91	Pellicciari et al.			
		5,061,701	10/29/91	Pellicciari et al.			
		5,063,222	11/05/91	Komoto et al.			
		5,075,464	12/24/91	Blohm et al.			
		5,135,919	08/04/92	Folkman et al.			
		5,192,756	03/09/93	Zasloff et al.			
		5,247,104	09/21/93	DeLuca et al.			
		5,250,524	10/05/93	Kramer et al.			
		5,637,691	06/10/97	Frye et al.			
Examiner				Date Considered			
Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) PTO Form 1449				Attorney Docket No. 036870-5067-05		Divisional of Application No. 09/833,055			
				Applicants: William A. KINNEY et al.				PAGE 2 of 6	
				Filing Date: Herewith		Prior Group Art Unit: 1616			

FOREIGN PATENT DOCUMENTS								
		Document Number	Date	Country	Class	Sub Class	Translation YES NO	
		2 361 899	03/17/78	France				
		1 565 351	04/166/80	United Kingdom				
		WO 87/02367	04/23/87	PCT				
		WO 91/19731	12/26/91	PCT				
		WO 93/25197	12/23/93	PCT				
		WO 94/17079	08/04/94	PCT				
		WO 94/19366	09/01/94	PCT				
		WO 94/20520	09/15/94	PCT				
		WO 95/24415	09/14/95	PCT				
		WO 96/40151	12/19/96	PCT				
		WO 96/40728	12/19/96	PCT				
		0 394 971 A1	10/31/90	European				
		0 466 315 A2	01/15/92	European				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
	Brown et al., "Selective Reductions. 40. A Critical Examination of the Relative Effectiveness of Various Reducing Agents for the Asymmetric Reduction of Different Classes of Ketones", <i>J. Org. Chem.</i> Vol. 52, No. 24, pp. 5406-54312 (1987)
	Wallbaum et al., "Asymmetric Syntheses with Chiral Oxazaborolidines", <i>Tetrahedron: Asymmetry</i> , Vol. 3, No. 12, pp. 1475-1504 (1992)
	Corey et al., "A Stable and Easily Prepared Catalyst for the Enantioselective Reduction of Ketones. Applications to Multistep Syntheses", <i>J. Am. Chem. Soc.</i> , Vol. 109, No. 25, pp. 7925-7926 (1987)
	Okamoto et al., "Asymmetric Isopropylation of Steroidal 24-aldehydes for the Synthesis of 24(R)-hydroxycholesterol", <i>Tetrahedron: Asymmetry</i> , Vol. 6, No. 3, pp. 767-778 (1995)
	Okamoto et al., "The First Convergent Synthesis of 1 α , 24(R)-dihydroxyvitamin D ₃ Via Diastereoselective Isopropylation and Alkylative Annyne Cyclization", <i>Tetrahedron</i> , Vol. 51, No. 19, pp. 5543-5556 (1995)
	Takatsuto et al., "Chirality Transfer in the Cholesterol Side Chain; Synthesis of (24R)- and (24S)-24-hydroxycholesterols", <i>Journal of the Chemical Society, Chemical Communications</i> , No. 4, pp. 258-260 (1982)

Examiner	Date Considered
----------	-----------------

Examiner:	Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
-----------	--

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) PTO Form 1449				Attorney Docket No. 036870-5067-05		Divisional of Application No. 09/833,055	
				Applicants: William A. KINNEY et al.		PAGE 3 of 6	
				Filing Date: Herewith		Prior Group Art Unit: 1616	
U.S. PATENT DOCUMENTS							
*Examiner Initial		Document Number	Date	Name	Class	Sub Class	Filing Date
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Sub Class	<u>Translation</u> YES NO
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
		Ishiguro et al., "Neighbouring Group Effects. Part 2. Effect of Epoxide on the Hydrolysis of Adjacent Acetate Groups", <i>Journal of the Chemical Society, Perkin Transactions 1</i> , No. 11, pp. 2507-2510 (1980)					
		Katsumi et al., "Syntheses of 24, 25-dihydroxyvitamin D ₂ , 24,25-dihydroxy-22-dehydrovitamin D ₃ , 25-hydroxy-24-oxo-22-dehydrovitamin D ₃ and 22,24,25-trihydroxyvitamin D ₃ ", <i>Chemical and Pharmaceutical Bulletin</i> , Vol. 35, No. 3, pp. 970-979 (1987)					
		Parker et al., "Asymmetric Reduction. A Convenient Method for the Reduction of Alkynyl Ketones", <i>J. Org. Chem.</i> , Vol. 61 (9), pp. 3214-3217 (1996)					
		Helal et al., "Direct Catalytic Enantioselective Reduction of Achiral α,β -ynones. Strong Remote Steric Effects Across the C-C Triple Bond", <i>J. Am. Chem. Soc.</i> , Vol. 118(44), pp. 10938-10939 (1996)					
		Imai et al., "Organoboron Compounds in Organic Synthesis. 2. Asymmetric Reduction of Dialkyl Ketones with (R,R)- or (S,S)-2,5-dimethylborolane", <i>J. Am. Chem. Soc.</i> , Vol. 108(23), pp. 7402-704 (1986)					
		Bach et al., "Highly Enantioenriched Propargylic Alcohols by Oxazaborolidine-mediated Reduction of Acetylenic Ketones", <i>J. Org. Chem.</i> , Vol. 61(25), pp. 9021-9025 (1996)					
		Rao et al., "Practical Approaches to Remote Asymmetric Induction in Steroidal Side-chains Utilizing Oxazaborolidine Reagents", <i>J. Org. Chem.</i> , Vol. 62(13), pp. 4541-4545 (1997)					
		McKenna, James et al., "Bis-steroids as Potential Enzyme Models: Perylene Solubilisation and Dye Spectral Changes with Aqueous Solutions of Some Derivatives of Conessine and Cholic Acid" <i>J.C.S. Chem. Comm.</i> , 1977, pp. 809-811					
		Crum, Rosa et al., "A New Class of Steroids Inhibits Angiogenesis in the Presence of Heparin or a Heparin Fragment," <i>SCIENCE</i> , vol. 230, 1985, PP. 1375-1378					
Examiner				Date Considered			
Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) PTO Form 1449				Attorney Docket No. 036870-5067-05		Divisional of Application No. 09/833,055	
				Applicants: William A. KINNEY et al.		PAGE 4 of 6	
				Filing Date: Herewith		Prior Group Art Unit: 1616	
U.S. PATENT DOCUMENTS							
*Examiner Initial		Document Number	Date	Name	Class	Sub Class	Filing Date
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Sub Class	<u>Translation</u> YES NO
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
		Derwent Abstract No. 86-085704, "Anticancer Drug Contains Shark Liver Extract of Doxorubicin," 1984					
		Biosis No. 82085007, "Studies on Antitumor Activity of Squalene and its Related Compounds," Yakugaku Zasshi, 1986					
		Chemical Abstract No. 111: 17264, "Increasing the Therapeutic Efficacy of Antitumor Drugs," 1989					
		Bellini, A.M. et al., "Antimicrobial Activity of Basic Cholane Derivatives, Part IX," <i>Arch. Pharm. (Weinheim)</i> 323, pp. 201-205 (1990)					
		Bellini, Anna M. Et al., "Antimicrobial Activity of Basic Cholane Derivatives. X. Synthesis of 3 α - and 3 β -amino-5 β -cholan-24-oic Acids, <i>Steroids</i> , Vol. 56, July 1991, pp. 395-397					
		Gagliardi, A., et al., "Inhibition of Angiogenesis by Antiestrogens," <i>Cancer Research</i> , 53, pp. 533-535, February 1, 1993					
		Moore, Karen S. Et al., "Squalamine: An Aminosterol Antibiotic from the Shark," <i>Proc. Natl. Acad. Sci., USA</i> , Vol. 90, pp. 1354-1358, February 1993					
		Wehrli, S. Et al., "Structure of the Novel Steroidal Antibiotic Squalamine Determined by Two-Dimensional NMR Spectroscopy," <i>Steroids</i> , Vol. 58, Number 8, August 1993, pp. 370-378					
		Children's Hospital of Pennsylvania, "Aminosterol Antibiotic," <i>Current Opinion in Therapeutic Patents</i> , September 1993, pp. 1369-70					
Examiner				Date Considered			
Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) PTO Form 1449				Attorney Docket No. 036870-5067-05		Divisional of Application No. 09/833,055			
				Applicants: William A. KINNEY et al.				PAGE 5 of 6	
				Filing Date: Herewith		Prior Group Art Unit: 1616			
U.S. PATENT DOCUMENTS									
*Examiner Initial		Document Number	Date	Name	Class	Sub Class	Filing Date		
FOREIGN PATENT DOCUMENTS									
		Document Number	Date	Country	Class	Sub Class	<u>Translation</u> YES NO		
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)									
		Auerbach, R. Et al., "Angiogenesis Inhibition: A Review;" <i>Pharmac. Ther.</i> , Vol. 63, pp. 265-311 1994							
		Moriarty, Robert M. et al., "Synthesis of Squalamine, A Steroidal Antibiotic from the Shark," <i>Tetrahedron Letters</i> , Vol. 35, No. 44, pp. 8103-8106, 1994							
		Sadownik, Andrzej et al., "Rapid Construction of a Squalamine Mimic;" <i>J. Am Chem. Soc.</i> , 1995, Vol. 117, pp. 6138-6139							
		"Shark Cartilage for Cancer Treatment," <i>P&T Newsletter</i> , March 1996, pp. 159-160							
		"Designing Therapies that Target Tumor Blood Vessels," <i>Science</i> , Vol. 275, 24 January 1997, pp. 482-484							
		Akhter, "Squalamine, A Novel Aminosterol Antibiotic is a Specific Inhibitor of Epithelial Brush Border Na ⁺ /H ⁺ Exchanger Isoform, NHE3," <i>FASEB Journal</i> , Vol. 10, No. 3 (1996), pg. A89							
		Nath, "The Novel Aminiosterol Antibiotics Squalamine and 1436 are Specific Inhibitors of Epithelial Brush Border Na ⁺ /H ⁺ Exchanger (NHE) Isoform, NHE3," <i>Gastroenterology</i> , Vol. 110, No. 4, Suppl. (1996), A349							
Examiner				Date Considered					
Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.									

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) PTO Form 1449				Attorney Docket No.: 036870-5067-05		Application No.: 09/833,055	
				Applicants: William A. KINNEY et al. Page 6 of 6			
				Filing Date: April 12, 2001		Group: 1616	
U.S. PATENT DOCUMENTS							
Examiner Initial		Document Number	Date	Name	Class	Sub Class	Filing Date
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Sub Class	Translation Yes No
		94/17079	4 August 1994	WO			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
	E. J. Corey et al., "A Stable and Easily Prepared Catalyst for the Emantioselective Reduction of Ketones. Applications to Multistep Syntheses", J Am. Chem. Soc., 109, pp. 7925-7926, (1987).						
	Kathlyn A. Parker et al., "Asymmetric Reduction. A Convenient Method for the Reduction of Alkynyl Ketones", J. Org. Chem., 61, p. 3214-3217 (1996).						
	Christopher J. Helal et al., "Direct Catalytic Enantioselective Reduction of Achiral α,β -Ynone. Strong Remote Steric Effects Across the C-C Triple Bond", J. Am. Chem. Soc., 118, p. 10938-10939 (1996).						
	Sabine Wallbaum et al., "Asymmetric Syntheses with Chiral Oxazaborolidines", <u>Tetrahedron:Asymmetry</u> 3, (12), pp. 1475-1504 (1992).						
Examiner				Date Considered			
Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication.							